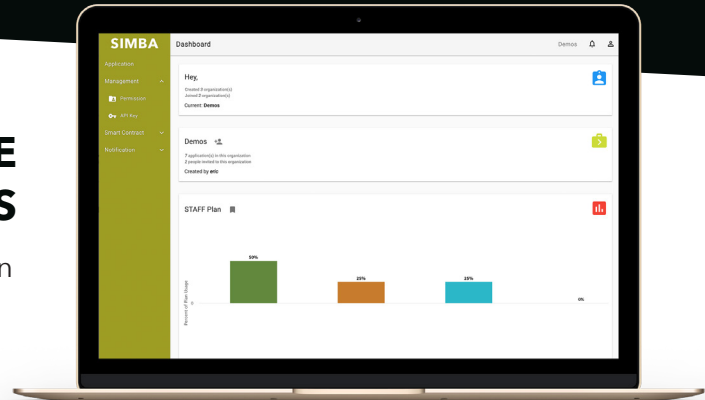


SIMBA CHAIN PLATFORM

OUR PLATFORM PROVIDES A SIMPLE WAY TO DEVELOP BLOCKCHAIN APPS

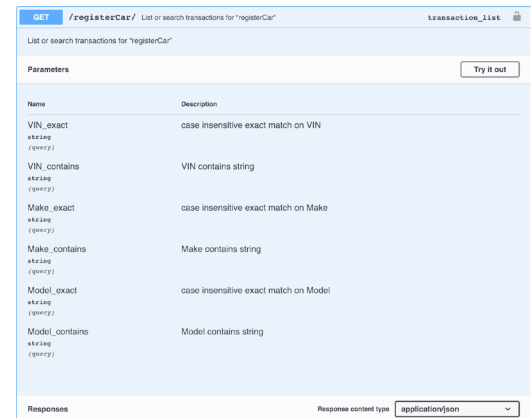
SIMBA Chain makes it easy to build and deploy blockchain systems across multiple blockchains and data stores.



API

The SIMBA platform auto-generates Representational State Transfer (REST) APIs, This provides REST-based access to smart contract methods that transact on the blockchain ledger and enables access control groups for reading or writing.

Each API endpoint allows multiple data files to be attached and stored off-chain in a data store. Data comes into the system as multipart attachments to the REST endpoints, which are then checked for access before being passed to a special data bundling mechanism. The bundling algorithm stores all files into the data store and generates hashcodes for aggregation into a manifest file, which is stored in the data store, with its hashcode bound on the blockchain to guarantee the integrity of the data input into the system.



BLOCKCHAIN

SIMBA provides a generic API to multiple blockchain systems so the system does not have a dependency on a single blockchain or distributed ledger technology.

SIMBA currently supports Ethereum and Quorum with Stellar being added soon. Many more are on the roadmap.

Although SIMBA Chain is proprietary, we will soon release a code generation capability that auto-generates source code that binds to the specific blockchain system and data store a user has configured.

CURRENTLY SUPPORTED BLOCKCHAIN



DECENTRALIZED

No single point of control which means there is no single point of failure.

IMMUTABLE

Once data is stored, it can't be tampered with, changed or deleted.

CUSTOMIZABLE

Bring your own logic, our platform auto-generates your custom API.

LOW LATENCY

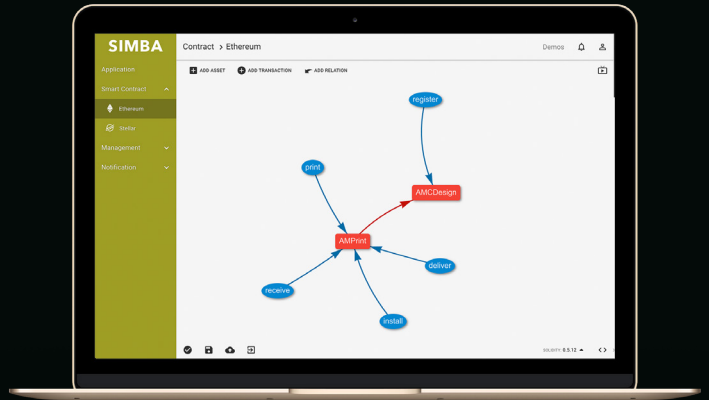
SIMBA uses Microsoft Azure Government for rapid transactions.



SMART CONTRACTS

Smart Contracts provide the interface and business logic to what is written on the blockchain. They also control what rules need to be met for successful write operations to take place.

In the SIMBA Chain platform, smart contracts are automatically generated through a simple interface. Users add assets or transactions along with their methods and parameters, and SIMBA Chain automatically generates the smart contract.



DATA STORES

Data Stores in SIMBA use the same adapter pattern as the blockchain (single generic REST interface), and can support the simple integration of different data stores. Currently SIMBA supports the Ceph, IPFS and flat-file-system-based data stores, and are currently testing Tahoe and Microsoft Azure Blob Storage.

Data flows into the system by attaching one or multiple files to the transaction. Transactions are then checked for access before being passed to the data bundling mechanism, which stores all files into the data store and collects each hashcode into a JSON manifest file.

The manifest is then stored into the data store and its hashcode is stored onto the blockchain. Using this mechanism, the system can easily retrieve all files by first retrieving the manifest, and then using each hashcode to retrieve the files. The hash also serves as a digest to guarantee the integrity of the data.

CURRENTLY SUPPORTED DATA STORES

- IPFS
- ceph
- Tahoe-LAFS
- Microsoft Azure Blob Storage

WALLETS

A private key of a Wallet is required to sign a transaction. SIMBA Chain doesn't store user's private keys. Instead, we provide a callback mechanism that allows the developer's application to sign transactions on behalf of their users. When a transaction request is made on SIMBA using the app API, it sends it to the blockchain adapter to generate the transaction payload. This payload is then returned to the sender for signing.

Along with the transaction payload the headers include the external user ID so users in the developer's external system can be extracted and their private key applied to the transaction, for signing. This signed transaction is returned to SIMBA for submission to the blockchain.

